

**County of Loudoun**  
**Department of Planning**

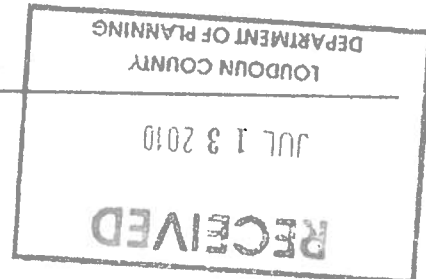
**MEMORANDUM**

**DATE:** July 13, 2010

**TO:** Marchant Schneider, Project Manager  
Land Use Review

**FROM:** Joe Gomey, AICP, LEED AP, Senior Planner  
Community Planning *JG*

**SUBJECT: ZMAP 2010-0001 & SPEX 2010-0003,  
HS-7 Dulles South and Elementary School, 2<sup>nd</sup> Referral**



**BACKGROUND**

The Loudoun County School Board proposes a Zoning Map Amendment to rezone three (3) acres of land from PD-GI (Planned Development - General Industrial) to TR-1 (Transition, Residential) and a Special Exception to allow a high school (HS-7) and an elementary school. The site is approximately 97.16 acres and is located on the east and west side of Goshen Road (Route 616), approximately 1 mile south of Route 50. The site is bounded by the Westport Subdivision to the south and west, a public park and open space easement to the east (abutting Route 659 Relocated) and planned residential uses to the north (Stone Ridge). The property is in the Ldn 60 1-mile buffer of the Airport Impact Overlay District.

A Commission Permit for the property (CMPT 2009-0013), known as the Goshen Road Assemblage, was approved by the Planning Commission on December 17, 2009 and ratified by the Board of Supervisors on January 5, 2010.

The applicant proposes a 2-story high school of up to 302,000 square feet, and a two-story elementary school, of up to 105,000 square feet, for a maximum of 407,000 square feet total, along with associated recreational facilities.

The high school is identified in the FY-2010-2014 School Board Adopted Capital Improvements Program (CIP) and is planned to be opened in the Fall of 2012. The high school would provide relief to Freedom High School, which had an enrollment of 1,609 students on September 30, 2009, a design capacity of 1,600 students, and a projected student population of 2,325 by 2012. The FY-2010-2014 CIP has further identified the need for three elementary schools to serve Dulles South and vicinity to the south of Route 50. The applicant proposes to identify this site as a future location of one of the elementary schools.

The property contains various Green Infrastructure resources including floodplain, surface waters, wetlands, forest resources, steep slopes, and moderately steep slopes.

### **EXECUTIVE SUMMARY**

Non-residential uses, such as schools, are envisioned within the Transition Policy Area along collector roads provided that they are developed at a scale that allows them to blend effectively (visually and spatially) into a rural landscape. Institutional uses, such as schools, will be compatible with the policies of the Transition Policy Area and serve to promote a rural character while serving both the rural and suburban populations.

The high school would provide enrollment relief to Freedom High School while the elementary school would help fulfill the needs of Dulles South. The schools are adjacent to the Suburban Policy Area and would be the focus of existing and potential future attendance areas. The proposed development has taken into account bicycle and pedestrian facilities, environmentally-sensitive areas, the use of low impact development techniques, and the use of sustainable building design measures.

### **COMPLIANCE WITH THE COMPREHENSIVE PLAN**

Refer to Community Planning Referral 1, dated April 20, 2010.

The location of the proposed schools is in conformance with the general policies of the Revised General Plan and school uses are appropriate uses within the Transition Policy Area. To be fully consistent with the Comprehensive Plan, staff recommends that the applicant address issues regarding forest resources, buffers, bicycle and pedestrian accommodations, and lighting.

### **OUTSTANDING ISSUES**

#### **Forest Resources**

In the 1<sup>st</sup> Referral, staff recommended that the applicant consider the replacement of the impacted forest resources within other portions of the Special Exception area, including the floodplain, other cleared areas within the Green Infrastructure Area, the proposed 50-foot Green Infrastructure Buffer, and buffer yards using indigenous plants. Staff recommended that the applicant coordinate with the County Urban Forester regarding these measures.

Two of the most significant reforestation opportunities include the open floodplain adjacent to the South Fork of Broad Run and the open sloped areas within the 50-foot Green Infrastructure buffer adjacent to the intermittent stream on the western portion of the site. Staff notes that the applicant submitted a Water and Sewer Facilities Map depicting existing and proposed water and sanitary lines. The north-south sanitary sewer line is proposed within the 50-foot Green Infrastructure buffer and through a wetland in the floodplain.

In response, the applicant stated that Loudoun County Public Schools (LCPS) will work with the County Urban Forester to develop a reforestation plan for recommended areas, to include the open floodplain associated with the South Fork of Broad Run and the open areas within the 50-foot Green Infrastructure buffer adjacent to the intermittent stream on the western portion of the property. The applicant stated that, depending on cost and budgeted funds, LCPS would reforest one of the areas.

***Staff recommends that the applicant commit to the reforestation of the open floodplain associated with the South Fork of Broad Run and the open areas within the 50-foot Green Infrastructure buffer adjacent to the intermittent stream on the western portion of the property, with priority to the floodplain. Also, to avoid or minimize further tree cover loss and to allow for the reforestation of the 50-foot Green Infrastructure buffer, staff recommends that the 8-inch sanitary sewer line and easement be located outside of the 50-foot Green Infrastructure buffer to the extent possible. Additionally, staff recommends that the line be adjusted within the floodplain to avoid wetland impacts.***

#### **Buffers & Planting Enhancements**

In the 1<sup>st</sup> Referral, staff recommended that the designated tree save area be augmented with other forested areas and that the applicant consult with the County Arborist for plants indigenous to the area for use in the planting enhancement areas.

In response the applicant stated that the Special Exception plat has been revised to incorporate a tree save area within the 50-foot Green Infrastructure buffer east of the high school and that the side and rear buffers of the elementary school would be enhanced to incorporate additional evergreen tree plantings. Sheet 3 of the Plat depicts a landscaped berm along the length of the high school parking area to screen the parking from the adjoining park, side and rear buffer enhancements at the elementary school site, and a planting enhancement west of the high school bus loop. Plat 3 notes that side and rear buffer enhancements at the elementary site will use Leyland Cypress trees.

***Staff recommends that the applicant preserve existing tree stands and large individual trees where possible, including within perimeter buffers and isolated tree stands.***

***Given the prominence, size, and importance of the enhanced buffer areas as habitat, staff recommends that the applicant commit to the use of indigenous plants for these plantings in consultation with the County Urban Forester. Such trees could include American Holly (Ilex opaca), Loblolly Pine (Pinus taeda), Shortleaf Pine (Pinus echinata), Eastern White Pine (Pinus strobus), and Eastern Red Cedar (Juniperus virginiana). Trees should be spaced to accommodate mature sizes.***

### **Bicycle & Pedestrian Accommodations**

In the 1<sup>st</sup> Referral staff recommended that the applicant commit to several bicycle and pedestrian facilities, including the following:

- A sidewalk on the south side of Road "B" along with crosswalks at the associated intersections; and
- A sidewalk on the east side of the north-south internal road opposite the softball field (on the west side of the adjacent park).

In response, the applicant stated that they met with County Parks staff who advised them that they did not want a sidewalk on the south side of Road "B" or on the west side of the park. Staff notes that County policies state that sidewalks shall be provided on both sides of roads in the Transition Policy Area (*Bike/Ped Plan, Chapter 4, Bicycle and Pedestrian Facility Selection Guidelines Table*).

***To help meet the mobility needs of the adjacent residents, staff recommends that the applicant commit to a sidewalk on the south side of Road "B" with two additional crosswalks at the Route 659 Relocated/Road "B" intersection and one additional crosswalk at the north-south internal road/Road "B" intersection.***

***Staff recommends two additional sidewalk connections in the following locations:***

- ***Along the driveway adjacent to the discus field, which would allow people to safely walk from the high school to the stadium; and***
- ***From the 10-foot multi-use trail serving the Westport development to the sidewalk/crosswalk near the front of the elementary school.***

### **Lighting**

In the 1<sup>st</sup> Referral, staff recommended that the applicant commit to lighting that is downward directed, is fully shielded, provides a glare-free environment, is confined to the site, and has illumination levels that are no greater than necessary for a light's intended purpose. All lighting should be designed to preclude light trespass onto adjoining properties, glare to passersby, skyglow, and deterioration of the nighttime environment.

In response, the applicant stated that lighting will be cut-off, fully shielded, and directed downward and inward and will meet the performance standards of the Zoning Ordinance.

***Staff recommends that the applicant's commitments be supplemented to address the following:***

- ***Reflector technology systems for athletic field lighting and the times that these lights will be turned off; and***
- ***Maximum heights for lighting fixtures and athletic field light poles.***

**RECOMMENDATION**

The construction of the proposed schools is in conformance with the general policies of the Revised General Plan and school facilities are appropriate uses within the Transition Policy Area. Staff supports the application but requests that the applicant address the issues raised above. Staff recommends approval of the application with conditions.

cc: Julie Pastor, AICP, Director, Planning  
Cynthia Keegan, AICP, Program Manager, Community Planning (via email)

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**Department of Planning**  
**MEMORANDUM**

**RECEIVED**

APR 20 2010

LOUDOUN COUNTY  
DEPARTMENT OF PLANNING

**DATE:** April 20, 2010

**TO:** Marchant Schneider, Project Manager  
Land Use Review

**FROM:** Joe Gorney, AICP, LEED AP, Senior Planner  
Community Planning

*YG*

**SUBJECT: ZMAP 2010-0001 & SPEX 2010-0003,  
HS-7 Dulles South and Elementary School**

**EXECUTIVE SUMMARY**

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Non-residential uses, such as schools, are envisioned within the Transition Policy Area along collector roads provided that they are developed at a scale that allows them to blend effectively (visually and spatially) into a rural landscape. Institutional uses, such as schools, will be compatible with the policies of the Transition Policy Area and serve to promote a rural character while serving both the rural and suburban populations.

The high school would provide relief to Freedom High School, which had an enrollment of 1,609 students on September 30, 2009, a design capacity of 1,600 students, and a projected student population of 2,325 by 2012 when HS-7 is planned to open. A portion of the site is designated for one of three elementary schools that have been identified in the FY-2010-2014 School Board Adopted Capital Improvements Program. In addition to enrollment relief, the schools are adjacent to the Suburban Policy Area and would be the focus of existing and potential future attendance areas. The proposed development has taken into account bicycle and pedestrian facilities, environmentally-sensitive areas, the use of low impact development techniques, and the use of sustainable building design measures.

The location of the proposed schools is in conformance with the general policies of the Revised General Plan and school uses are appropriate uses within the Transition Policy Area. To be fully consistent with the Comprehensive Plan, staff recommends that the applicant address issues regarding forest resources, stormwater management, screening, and building design.

## BACKGROUND

The Loudoun County School Board proposes a Zoning Map Amendment to rezone three (3) acres of land from PD-GI (Planned Development - General Industrial) to TR-1 (Transition Residential) and a Special Exception to allow a high school (HS-7) and an elementary school. The site is approximately 97.16 acres and is located on the east and west side of Goshen Road (Route 616), approximately 1 mile south of Route 50. The site is bounded by the Westport Subdivision to the south and west, a public park and open space easement to the east (abutting Route 659 Relocated) and planned residential uses to the north (Stone Ridge). The property is in the Ldn 60 1-mile buffer of the Airport Impact Overlay District.

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Vicinity Map

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The high school is identified in the FY-2010-2014 School Board Adopted Capital Improvements Program (CIP) and is planned to be opened in the Fall of 2012. The high school would provide relief to Freedom High School, which had an enrollment of 1,609 students on September 30, 2009, a design capacity of 1,600 students, and a projected student population of 2,325 by 2012. The FY-2010-2014 CIP has further identified the need for three elementary schools to serve Dulles South and vicinity to the south of Route 50. Because the planned



opening of the elementary school is yet to be determined, the applicant proposes to identify this site as a future location of one of the elementary schools.

The property contains various Green Infrastructure resources including floodplain, surface waters, wetlands, forest resources, steep slopes, and moderately steep slopes.

#### **COMPLIANCE WITH THE COMPREHENSIVE PLAN**

The site is governed under the policies of the Revised General Plan, the Countywide Transportation Plan (CTP), and the Bicycle and Pedestrian Mobility Master Plan (Bike/Ped Plan). The site is located in the Upper Broad Run and Upper Foley subareas of the Transition Policy Area (Revised General Plan, Chapter 8, Transition Policy Area Subarea Map). The County's vision for the Transition Policy Area is for land uses that provide a visual and spatial transition between the suburban development to the east and the rural development to the west (Revised General Plan, Chapter 8, General Policy 2).

Specifically, the non-residential policies of Chapters 3, 5, 8 and 11 of the Revised General Plan apply to the proposed development including building scale and form, parking, buffering, stormwater management, efficiency, and lighting and signage.

The environmental features on the subject site were assessed applying the Green Infrastructure policies of Chapter 5 (The Green Infrastructure: Environmental, Natural, and Heritage Resources) of the Revised General Plan, including policies pertaining to river and stream corridor resources, forest resources, plant and wildlife habitats, and archaeological resources.

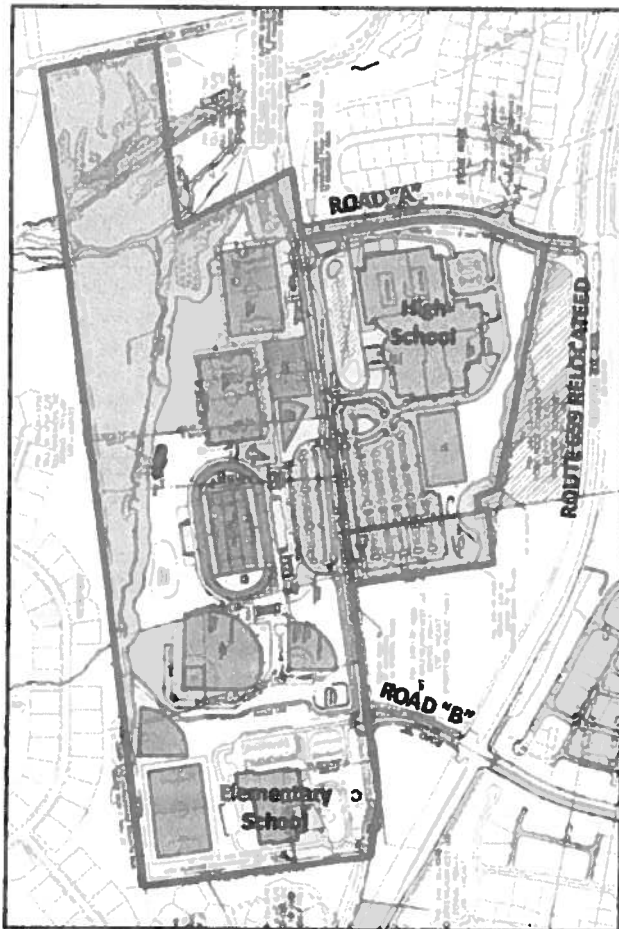
The roadway network was assessed using Appendix 1 of the CTP. Bicycle and pedestrian accommodations were assessed using the Land Development, Transportation Project Development, Walkways and Sidewalks, and Baseline Connecting Roadways policies and guidance of Chapters 4 and 5 of the Bike/Ped Plan.

#### **ANALYSIS**

##### **LAND USE**

The County encourages the development of non-residential uses in the Transition Policy Area that provide a transition from suburban to rural. Such uses may include, but are not limited to, equestrian centers, golf courses, retail nurseries, boarding schools and kennels, and large institutions, provided they meet specific criteria that address the nature, scale, and intensity of the use, market area, and design characteristics (Revised General Plan, Chapter 8, Community Design Policy 15). Institutional uses include government offices and facilities; and public or private health, recreational, or educational uses and facilities such as schools, training centers, universities, libraries, hospitals, camps, congregate care facilities, or similar facilities (Revised General Plan, Glossary, Institutional Uses definition). Non-residential uses will serve to define the Transition Policy Area as a unique planning area. The County

will allow for a range of uses that are compatible with desired development patterns and the rural landscape (*Revised General Plan, Chapter 8, Community Design Policy 16*). Within the Transition Area, such uses are to front major arterial or collector roads (*Revised General Plan, Transition Policy Area Design Guideline 3c*).



**Proposed Plat**

The applicant proposes a two-story high school of up to 292,000 square feet with a student capacity of 1,800 along with associated recreational and athletic facilities. The structures associated with the recreational facilities, including a concession stand and storage buildings, contain an additional 10,000 square feet. Lighting is proposed for the high school stadium and the baseball and softball fields. The elementary school complex includes a two-story building of up to 105,000 square feet with a student capacity of 875 and recreational facilities including a softball field and an all-purpose field. Open space, both active and passive, accounts for approximately 67 percent of the site.

The proposed schools would front the planned Route 659 Relocated, which is planned as a minor arterial (CTP, Appendix 1, *Design Guidelines for Major Roadways, Transition Policy Area, Route 659 Relocated*).

The schools would access Route 659 Relocated via internal Roads "A" and "B." Goshen Road is proposed to be abandoned and used as an internal road. A wetlands preservation easement and buffer (part of the Stone Ridge development) and a park (part of the CD Smith development) border Route 659 and provide a non-developable area between the proposed schools site and Route 659 Relocated. The buffer area provides a continuous network of open space to help enhance the visual prominence of the school buildings along Route 659 and provides a transition from the Suburban Policy Area to the Rural Policy Area. The school is proposed on the boundary between the Suburban and Transition Policy Areas and would serve students from both developed and planned communities both within the Suburban and Transition Policy Areas.

***Schools are envisioned within the Transition Policy Area along arterial and collector roads provided that they are developed at a scale that allows them to blend effectively (visually and spatially) into a rural landscape while serving both the suburban and rural populations. Staff finds that the proposed location for the schools is in conformance with Comprehensive Plan policies. However, several issues pertaining to Green Infrastructure and site design should be addressed as discussed below.***

### **GREEN INFRASTRUCTURE**

The Green Infrastructure is a collection of natural, cultural, heritage, environmental, protected, passive, and active resources that are integrated into a related system. These resources include major rivers, stream corridors, floodplains and wetlands, steep slopes, vegetated landscapes, wildlife habitats, scenic corridors, parks, greenways, trails, and recreational facilities (Revised General Plan, Chapter 5, Green Infrastructure Policy 1). The County uses integrated management strategies for the Green Infrastructure to ensure that all land use planning and development respect and preserve the holistic nature of the elements of the Green Infrastructure (Revised General Plan, Chapter 5, Green Infrastructure Policy 2). The Plan calls for all development within the Transition Policy Area to be clustered with 50 to 70 percent open space and the full implementation of the Green Infrastructure policies (Revised General Plan, Chapter 8, Land Use Pattern, text).

The subject site contains significant Green Infrastructure resources including floodplains, wetlands, forest resources, steep slopes, moderately steep slopes, and historic resources. The site is also impacted by the Ldn 60 1-mile buffer of the Airport Impact Overlay District associated with the Dulles International Airport. Green Infrastructure elements are discussed below.

The applicant proposes approximately 25 percent of the site as natural open space, including a proposed 50-foot Green Infrastructure Buffer surrounding floodplains, steep and moderately steep slopes, wetlands, streams, and Tree Save Areas.

### **River & Stream Corridor Resources**

River and stream corridor resources, including streams, floodplains, and wetlands, are significant elements of the Green Infrastructure. The Comprehensive Plan permits a limited number of uses in the stream corridor, including passive and active recreation, road crossings, pervious paths and trails, utilities and utility rights-of-way, public lakes and ponds, public water supply reservoirs, and planting native vegetation (Revised General Plan, Chapter 5, River and Stream Corridor Resources Policy 18).

The Revised General Plan calls for the protection of surface water resources from contamination and pollution and preventing the degradation of water quality in the watersheds. Impervious surfaces, including parking lots and rooftops, are anticipated

sources of runoff and pollutants, such as litter, road salts, oil, grease, and heavy metals, which impact water quality (Revised General Plan, Chapter 5, Surface and Groundwater Resources, text). Increased storm runoff volumes and velocities could scour adjacent drainageways, impact wetland resources, and impact adjacent properties.

Design standards and principles should preserve open space and natural resources, minimize the creation of new impervious areas, and minimize increases in post-development runoff peak rate, frequency, and volume (Revised General Plan, Chapter 5, Surface Water Policy 16). Additionally, the County supports the federal goal of no net loss to wetlands (Revised General Plan, Chapter 5, River and Stream Corridor Resources Policy 23).

The proposed development would have no direct impact on surface waters, floodplains, wetlands, or associated steep slopes. The applicant proposes the preservation of the entirety of the on-site river and stream corridors as part of the proposed Green Infrastructure Area and a 50-foot Green Infrastructure Buffer. Road "A," near its intersection with Route 659 Relocated, would cross a perennial stream. The applicant has not indicated the type of stream crossing to be used.

***For the perennial stream near the intersection of Road "A" and Route 659 Relocated, staff recommends that the applicant use a stream crossing that protects the integrity of the streambed.***

### **Forest Resources**

The County's forests and trees improve air and water quality, offer important habitat for birds, small mammals and other wildlife, and are buffers between communities. Forests and trees conserve energy by providing shade and evaporative cooling through transpiration. They reduce wind speed, redirect airflow, reduce stormwater runoff, and reduce soil erosion. Forests also provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment (Revised General Plan, Chapter 5, Forests, Trees, and Vegetation, text). The County encourages the preservation, protection, and management of forest resources for their economic and environmental benefits (Revised General Plan, Chapter 5, Forests, Trees, and Vegetation Policy 1). Forest Management Plans, which are required prior to land development, will demonstrate management strategies that ensure the long-term sustainability of designated tree save areas (Revised General Plan, Chapter 5, Forests, Trees, and Vegetation Policy 3).

County policies encourage the preservation of existing vegetation and wildlife habitat on developing properties (Revised General Plan, Chapter 5, Forests, Trees, and Vegetation Policy 10). Additionally, the County encourages the planting of indigenous vegetation (Revised General Plan, Chapter 5, Plant and Wildlife Habitats Policy 5).

The site contains a diversity of tree species from early successional to mature. The southern portion of the site contains the highest quality of trees, including larger trees, primarily oaks, up to 30 inches dbh (diameter at breast height). These resources would be impacted by the elementary school facilities. Portions of the site have been designated as Tree Save Areas. Staff notes that portions of some areas, including the applicant's proposed 50-foot Green Infrastructure Buffer and floodplain, have been previously cleared of forest resources.

***The preservation of existing vegetation in the proposed Tree Save Areas and the Green Infrastructure Area is consistent with the rural character envisioned in the Plan for developments in the Transition Policy Area. Staff recommends that the Tree Save Area be augmented with other forested areas, including the area east of the high school and the associated Physical Education Field, and the side and rear elementary school buffers.***

***Staff recommends that the applicant consider the replacement of the impacted forest resources within other portions of the Special Exception area, including the floodplain, other cleared areas within the Green Infrastructure Area, the proposed 50-foot Green Infrastructure Buffer, and buffer yards using indigenous plants. The applicant should coordinate with the County Urban Forester regarding these measures.***

***Staff further recommends a commitment to a long-term maintenance plan and forestry best management practices, including the removal of invasive species.***

***Staff recommends that the applicant specify the tree protection measures to be taken during construction to protect the surrounding vegetation from any direct physical damage or from indirect impacts, including soil compaction.***

#### **Historic and Archaeological Resources**

The Revised General Plan states the County will require an archaeological and historic resources survey as part of all development applications (Revised General Plan, Chapter 5, Historic and Archaeological Resources Policy 11). The County will also protect structures and other features of historic significance in the context of their natural settings and will work with landowners to convey the historic value of the resource to the community at large. Structures and other features of particular historical significance will be retained, restored, or utilized in adaptive reuse (Revised General Plan, Chapter 5, Historic and Archaeological Resources Policy 8).

***Staff evaluation of historic and archaeological resources is attached.***

## **SITE DESIGN**

All public facilities will observe the location and design criteria as outlined in the Comprehensive Plan (Revised General Plan, Chapter 3, General Public Facilities Policy 4). Non-residential uses, such as large institutions, are anticipated within the Transition Policy Area, provided that they meet specific criteria and address the nature, scale, intensity, and design characteristics of the use (Revised General Plan, Chapter 8, Community Design Policy 15).

### **Building Scale & Form**

Large-scale civic or institutional uses requiring more than 15 buildable acres, either individually or in a multipurpose facility, should be located on the periphery of an individual neighborhood or in core areas on roads that can accommodate the anticipated traffic volume (Revised General Plan, Chapter 8, Community Design Policy 23c). Within the Transition Area, such uses are to front major arterial or collector roads (Revised General Plan, Chapter 11, Transition Policy Area Design Guidelines Policy 3c) and are to be developed at a scale that allows them to blend effectively (visually and spatially) into a rural landscape (Revised General Plan, Chapter 11, Transition Policy Area Design Guidelines Policy 3a).

Within the Transition Policy Area, individual buildings of non-residential development along arterial and collector roads will not be greater than 40 feet in height and 150 feet in length. Building heights will relate to the surrounding landscape and heights of adjacent structures. Building heights can be stepped to relate to adjoining structures (Revised General Plan, Chapter 11, Transition Policy Area Design Guideline 3b).

The scale and the volume of the primary built mass and accessory elements should not dominate over the natural landscape. Buildings should be shielded from the road using such items as natural landscaping and earthen berms. Developments will be sensitive to the use of glass and night lighting. These building elements will be buffered from access roads (Revised General Plan, Chapter 11, Transition Policy Area Design Guideline 3c). Additionally, continuous plane building surfaces will be avoided. Homogeneous surfaces shall not exceed a linear distance of 20 feet especially when they front public access roads, such as major arterial or collector roads. Such surfaces will be broken into smaller segments through fenestration and setbacks (Revised General Plan, Chapter 11, Transition Policy Area Design Guideline 3c).

The high school is planned as a two-story structure with a maximum height of 40 feet and a footprint of approximately 620' x 490'. The elementary school is planned as a two-story structure with a maximum height of 40 feet and a footprint of approximately 300' x 200'. The applicant has also provided plan views and elevations for the high school and elementary school.

The applicant states that the building design will incorporate features to provide an aesthetic appearance including double hung windows similar to residential construction and accent materials to provide interest in color and texture.

***Because the school buildings are longer than 150' in length, they do not meet County policies regarding the length of non-residential uses within the Transition Area. However, staff notes that the applicant has broken up several large building segments into smaller segments through the use of fenestration and setbacks. Staff recommends that views of the largest continuous surfaces be filtered through the use of nearby plantings.***

***Staff recommends that plantings be placed throughout the site, particularly shade trees and large shrubs, to help screen and soften views of buildings from roads, enhance the visual quality of the project, provide students, employees, and users of the facilities with open space, mitigate environmental impacts, allow the incorporation of indigenous vegetation into the project, and provide wildlife habitat.***

***Staff recommends that the applicant commit to the use of the depicted architectural treatments to ensure compatibility with the surrounding uses.***

#### **Parking**

The Plan states that parking areas will be located behind buildings and will not be the dominant feature of the landscape. Paved parking surfaces will be broken into modules; interspersed with tree plantings and other on-site landscape materials to prevent the creation of large paved surfaces as associated with suburban malls or office complexes (Revised General Plan, Chapter 11, Transition Policy Area Design Guideline 3c).

The applicant has generally placed parking modules adjacent to the proposed buildings. Parking would be screened from the neighboring uses by buffers and open spaces.

***Staff recommends that parking surfaces be interspersed with tree plantings and other on-site landscape materials to prevent the creation of large continuous paved surfaces. Staff also recommends that the applicant pay special attention to views of parking areas from the adjacent uses and consider depressing the parking areas and/or screening them with berms to reduce their visual impact. The applicant should consider the use of a short berm to block the view of the southern high school parking lot from the adjacent proposed parkland.***

#### **Buffering**

Schools play a special role in neighborhoods and communities. As focal points, it is important that their location and design set the highest possible standards (Revised General Plan, Chapter 3, Public Facilities, text).

Additionally, the Plan states that the "County will require all land development applications that propose land uses adjacent to any of the existing and/or proposed arterial and major collector roads will be designed to ensure that no residential or other type(s) of noise-sensitive use(s) will have traffic noise impacts which occur when the predicted traffic noise levels approach or exceed the noise abatement criteria on the Noise Abatement Criteria (NAC) Hourly A-weighted Sound Levels table, or when predicted traffic noise levels substantially exceed existing noise levels" (Revised General Plan, Chapter 5, Highway Noise Policy 2). The NAC for schools is 67 dB(A) for exterior areas and 52 dB(A) for interior areas (Revised General Plan, Chapter 5, Noise Abatement Criteria (NAC) Hourly A-Weighted Sound Levels Table). Therefore, impacts would occur at 66 dB(A) or greater for exterior areas or 51 dB(A) or greater for interior areas.

In regards to buffer design, the applicant has planned a 25-foot Type 2 Front Buffer to the north of the high school, a 25-foot Type 2 Side Buffer with planting enhancement to the south of the elementary school, and a 25-foot Type 2 Rear Buffer with planting enhancement to the west of the elementary school. Leyland Cypress, a non-native plant, is proposed for the planting enhancement.

***Staff recommends that the applicant commit to a landscape plan with special attention to the project's visual impact. Staff recommends that the plants frame front views of the schools, filter views of utility and parking areas, and be repeated throughout the school campus. The applicant should commit to the landscaping and buffering, a long-term maintenance plan, and the use of indigenous species for most or all of the plantings. Staff also recommends that the applicant consult with the County Arborist for plants indigenous to the area for use in the planting enhancement areas. Plantings should not be limited to external buffers, but should flow smoothly from external buffers into adjacent internal planting spaces.***

#### **Stormwater Management**

The project's proposed impervious surfaces, including parking lots and rooftops, are anticipated sources of runoff and pollutants, such as litter, road salts, oil, grease, and heavy metals, which impact water quality (Revised General Plan, Chapter 5, Surface and Groundwater Resources, text). Grass and landscape areas can also be expected to have substances, such as fertilizers, pesticides, and herbicides, applied to them each year. Increased storm runoff volumes and velocities are also expected, which could scour adjacent drainageways and impact wetland resources, adjacent properties, and wildlife habitat.

To protect water resources and the integrity of neighboring properties, the Revised General Plan calls for low impact development (LID) techniques, which integrate hydrologically functional designs with methods for preventing pollution (Revised General Plan, Chapter 5, Surface Water Policy 2). LID approaches seek to control



runoff discharge, volume, frequency, and quality in order to mimic predevelopment runoff conditions through a variety of small-scale site design techniques. LID techniques can help reduce sedimentation and erosion, trap and remove pollutants such as nitrogen, phosphorus, metals, and organic compounds, protect wildlife habitat, store flood waters, and maintain the overall water quality of nearby streams. LID facilities should be located as close as possible to impervious areas and utilize the landscape and soils to naturally move, store, and filter run-off. The associated flow reductions and water quality improvements can then benefit the receiving streams. LID techniques include:

- Permeable paving;
- Porous concrete;
- Native landscaping enhanced through the routing of runoff through these areas;
- Rain gardens;
- Native-vegetated drainage swales for the movement and temporary storage of runoff;
- Vegetated filter strips that can slow runoff speed, trap sediment and pollutants, and provide additional water absorption;
- The collection and use of rooftop runoff for irrigation; and
- Green roofs.

The proposed plat depicts the location of several potential Stormwater Management/Best Management Practices (SWM/BMP) facilities and provides a narrative profiling possible water protection measures. The proposed plat states that the number, type, size, and location of possible SWM/BMP facilities and possible LID and water quality measures are to be determined with final engineering.

***Staff recommends water treatment measures that mimic the pre-development conditions of the site, mitigate impacts to the watershed, and treat the stormwater runoff as an amenity, visible to students, employees, and visitors. The applicant should consider various site measures, such as permeable pavers, porous concrete, cisterns, planted swales, curb cuts, rain gardens, and bioretention filters adjacent to impervious areas, to promote infiltration on-site, minimize peak storm flows, and help filter non-point source pollutants. Pipe installation should be minimized. Staff recommends that stormwater management techniques provide efficient pollutant removal, that existing drainage patterns and hydrology to wetlands be maintained, and that low impact development (LID) techniques such as bioretention and sheet flow to vegetated buffer areas be implemented.***

### **Efficiency**

In implementing its program for achieving and sustaining a Built Environment of high quality, the County will emphasize its role as leader and facilitator, and as a source of information on environmental design options and procedures (Revised General Plan, Chapter 5, Built Environment Policy 2).

The applicant has listed several sustainable design practices that have been or will be incorporated into school projects. The applicant states that the "Loudoun County School Board, as a goal for design, construction, renovation, and operation of all Loudoun County public facilities will strive to meet or exceed the criteria of nationally recognized programs for measuring energy efficiency ..." The applicant also listed examples of sustainable materials and practices incorporated into schools facilities to include:

- Sustainable design and operations standards in accordance with the EPA Energy Star Program;
- Energy Management Control Systems for lighting and temperature control systems;
- Variable air volume Heating Ventilation and Air Conditioning (HVAC) systems;
- HVAC and electrical systems commissioning services during design and construction;
- Carbon dioxide sensors in high occupancy areas;
- Adjustable classroom lighting depending on natural light levels;
- Full cut-off security and parking lot lighting;
- Energy-efficient lighting fixtures;
- Low Volatile Organic Compound (VOC) materials;
- Water-conserving control valves in plumbing fixtures;
- Low-flow urinals and toilets;
- LID stormwater management facilities; and
- Local product specification to minimize travel distances.

***Staff recommends that the applicant specify and commit to the sustainable design measures to be incorporated into the project site and building.***

#### **Bicycle & Pedestrian Accommodations**

All land development applications are to provide bicycle, pedestrian, and transit access linkages to the County Bicycle and Pedestrian Network (*Bike/Ped Plan, Chapter 4, Land Development Policy 5*). Developments should enhance bicycle and pedestrian mobility throughout the County with attention to mobility both within a site and between adjacent sites (*Bike/Ped Plan, Chapter 4, Land Development Policies 3, 5, 6, & 7*). The CTP states that all development proposal site plans will show safe, direct, and barrier-free pedestrian and bicycle circulation systems (*CTP, Chapter 2, Pedestrian and Bicycle Facilities Policy 5*).

Public school sites should be located at the focus of the attendance area, and will provide safe and convenient access for students. All public schools will be linked to adjacent neighborhoods by sidewalks or trails on both sides of roadways and crosswalks, and where possible, linked to greenways or trails (*Revised General Plan, Chapter 3, School Policy 4*).

Bicycle facilities will be designed in accordance with nationally accepted guidelines established by organizations such as American Association of State Highway and Transportation Officials (AASHTO) and the Americans with Disabilities Act Accessibility Guidelines (ADAAG) and the Loudoun County Bicycle and Pedestrian Facility Design Toolkit (*Bike/Ped Plan, Chapter 4, Transportation Project Development Policy 2*). Shared-use paths are to be 10 feet wide and paved (*Bike/Ped Plan, Chapter 4, Shared Use Pathways, text, & Chapter 5, Baseline Connecting Roadways Policy 1*). Other roads, as a minimum, will have sidewalks on both sides, with widths from 5 to 6 feet. Vegetated buffers shall also be provided between roads and sidewalks. Six-foot wide sidewalks will feature 4-foot wide vegetated buffers (*Bike/Ped Plan, Chapter 4, Walkway and Sidewalk Policy 2*).

Within and around the project area, Route 659 Relocated is planned as a Baseline Connecting Roadway for the County Bicycle and Pedestrian Network (*Bike/Ped Plan, East Loudoun County Map*). Such roadways were selected to provide comprehensive connectivity throughout the County and its most populated areas (*Bike/Ped Plan, Chapter 5, Baseline Connecting Roadways, text*).

The applicant has provided a Pedestrian Circulation Map depicting 10-foot multi-use trails, sidewalks, and crosswalks. Multi-Use trail stubs are planned to the south and west into the proposed Westport subdivision.

***In addition to the facilities depicted on the Pedestrian Circulation Map, staff recommends that the applicant commit to the following facilities:***

- ***A sidewalk on the east side of the internal loop road to the south and east of the proposed high school;***
- ***A sidewalk on the south side of Road "B" along with two additional crosswalks at the Route 659 Relocated/Road "B" intersection and one additional crosswalk at the north-south internal road/Road "B" intersection; and***
- ***An additional sidewalk on the east side of the north-south internal road opposite the high school softball field.***

***Staff recommends that all bicycle and pedestrian facilities be constructed in accordance with County policies, AASHTO, and ADA.***

#### **Lighting & Signage**

County policies call for appropriate lighting to achieve the following:

- Promote the use of lighting for convenience and safety without the nuisance associated with light pollution;
- Promote a glare-free environment through proper lighting performance standards to improve visibility and enhance public safety;
- Promote appropriate lighting standards to conserve energy; and,

- Develop appropriate lighting standards to prohibit unnecessary and intrusive light trespass that detracts from the beauty and view of the night sky (Revised General Plan, Chapter 5, Lighting and Night Sky Policy 1).

Additionally, signage will be scaled and designed to be compatible with the surrounding landscape (Revised General Plan, Chapter 11, Transition Policy Area Design Guideline 3c).

The applicant states that lighting of the school facilities is provided for visibility in the parking lot and around the immediate school building for safety and security purposes. In addition, the high school stadium and baseball and softball fields will be lighted. Lights will be shielded and directional.

***Staff recommends that the applicant commit to lighting that is downward directed, is fully shielded, provides a glare-free environment, is confined to the site, and has illumination levels that are no greater than necessary for a light's intended purpose. All lighting should be designed to preclude light trespass onto adjoining properties, glare to passersby, skyglow, and deterioration of the nighttime environment.***

***Staff also encourages the applicant to provide signage that will alert people to the presence of significant environmental features, such as the Tree Save Area, wetlands, and floodplain. The signs should also include interpretive information regarding the natural significance of the area, particularly along pedestrian pathways.***

#### **RECOMMENDATION**

The construction of the proposed schools is in conformance with the general policies of the Revised General Plan and school facilities are appropriate uses within the Transition Policy Area. However, staff requests that the applicant address the issues raised above so that the application can be fully evaluated for conformance with Green Infrastructure and site design policies.

Staff is available to meet with the applicant to discuss these issues.

cc: Julie Pastor, AICP, Director, Planning  
Cynthia Keegan, AICP, Program Manager, Community Planning (via email)

Attachment: Historic and Archaeological Resources Referral

**County of Loudoun**  
**Department of Planning**  
**MEMORANDUM**

**DATE:** April 19, 2010

**TO:** Joe Gorney, Senior Planner, Community Planning

**FROM:** Heidi Siebentritt, Historic Preservation Planner, Community Information and Outreach

**SUBJECT: ZMAP 2010-0001 & SPEX 2010-0003, HS-7 Dulles South and Elementary School**

**Background**

The applicant is requesting approval of a Zoning Map Amendment (ZMAP) and a Special Exception (SPEX) to allow the construction of a high school (HS-7) and an elementary school on an assemblage of properties totaling 97.16 acres. The subject properties are located west of future Relocated 659, and north of Route 620. The assemblage is located partially within the Stone Ridge residential development.

**Plan Compliance**

The subject property is governed by the policies of the Revised General Plan and the Heritage Preservation Plan.

**Analysis**

The subject properties have been the subject of previous archaeological and architectural surveys related to the Stone Ridge development (ZMAP 2002-0003). The applicant has submitted a consolidated Phase 1 archaeological report prepared by Thunderbird Archeology in 2009 which includes the results of previous surveys.

Within the subject properties, three architectural resources and one archaeological resource were recorded. Each resource was surveyed and given a state designated resource identification number by the Virginia Department of Historic Resources (VDHR). All of the recorded resources will be demolished as part of the proposed development. Architectural resource #053-6070 is a circa 1940 dwelling with outbuildings, resource #053-6050 is a circa 1900 dwelling with outbuildings and resource #053-6051 is a circa 1870 dwelling. Archaeological resource #44LD1560 represents a scatter of artifacts related to the circa 1900 dwelling (#053-6050).

The consultant has recommended that none of the identified architectural resources are eligible for listing in the National Register of Historic Places because they lack architectural significance and sufficient architectural and historic integrity. These structures have been significantly altered since their original construction with additions and the removal of historic materials. Archaeological resource 44LD1560 which relates to the circa 1900 dwelling (#053-6050) is also deemed ineligible for the National Register due to the small number of artifacts recovered and previous ground disturbance.

VDHR has reviewed the consultant's findings and recommendations for all the identified resources. VDHR has concurred with the consultant that the three identified architectural resources (053-6070, 6050 and 6051) and archaeological resource 44LD1560 are not considered to be historically significant and are not eligible for listing in the National Register of Historic Places. Staff concurs with VDHR (see attached VDHR resource surveys forms).

The Heritage Preservation Plan calls for the preservation of significant historic buildings in their historic contexts and gives precedence to resources that are listed in the National Register of Historic Places or deemed eligible for such listing (*Heritage Preservation Plan, Chapter Nine, Development Review, Policies 2 and 3*). National Register eligibility is the standard criteria used by the County to determine if a resource is historically significant.

#### **Recommendation**

Staff concurs that the identified resources within the subject 97.16 acres of land do not possess sufficient historic significance to be listed in the National Register of Historic Places. When a structure that is 50 years old or older is not deemed historically significant under National Register criteria, staff typically requests that an architectural survey be conducted to document the building prior to demolition. In this case, the buildings have already been professionally surveyed and documented for the archival record. No further mitigation of impacts to these resources is warranted.

cc: Michael "Miguel" Salinas, Program Manager, CIO  
Julie Pastor, AICP, Director, Department of Planning

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6070**

**Other DHR ID#:**

**Resource Information**

**Resource Name(s):** House, Goshen Road (Function/Location)  
Larsen House (Current)  
**Date of Construction:** post 1900

**Local Historic District :**

**National Register Eligibility Status**

Property has been recommended Not Eligible for listing

**Location of Resource**

**County/Independent City:** Commonwealth of Virginia  
Loudoun  
**Magisterial District:**  
**Town/Village/Hamlet:** Aldie  
**Tax Parcel:** 247-17-3577  
**Zip Code:** 20105  
**Address(s):** Goshen Road (Current)  
**USGS Quadrangle Name:** ARCOLA  
**UTM Boundary Coordinates :**

	<u>NAD</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>
<b>UTM Center coordinates :</b>		18	277135	4312404
<b>UTM Data Restricted?.</b>	No	18	277135	4312404

**Resource Description**

**Ownership Status:** Private  
**Government Agency Owner:**  
**Acreage:** 15.02  
**Surrounding area:** Rural  
**Open to Public:** No  
**Site Description:**

15.02 acre site is located on north bank of the South Fork of Broad Run. It is located in a wooded area at the southern end of a low ridgeline. The house is situated approximately 800 feet west of Goshen Road.

**Secondary Resource Summary:**

There are three wood frame, shed roof outbuildings associated with Architectural Resource 053-6070. The three outbuildings are situated on the same landform, in a wooded setting. There is an outhouse located approximately 65 feet southwest of the main structure. The second outbuilding is possibly a small well-house located approximately 20 feet west of the main structure. The third is a barn located about 200 feet to the south. The barn is located slightly downslope to the south of the house.

**Individual Resource Information**

<u>Count</u>	<u>Resource Types</u>	<u>Resource Status</u>
1	Single Dwelling	Contributing
1	Barn	Contributing
1	Shed	Contributing
1	Privy	Contributing

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6070**

**Other DHR ID#:**

**Individual Resource Detail Information**

<i>Resource Type:</i>	Barn	<i>Primary Resource?</i>	No
<i>Date of Construction:</i>	post 1900 (Site Visit)	<i>Accessed?</i>	Yes
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	1.0
<i>Form:</i>		<i>Condition:</i>	Deteriorated
<i>Interior Plan Type:</i>		<i>Threats to Resource:</i>	Deterioration Development Neglect

The third outbuilding is a barn located about 200 feet to the south. The barn is located slightly downslope to the south of the house.

**Individual Resource Detail Information**

<i>Resource Type:</i>	Shed	<i>Primary Resource?</i>	No
<i>Date of Construction:</i>	post 1900 (Site Visit)	<i>Accessed?</i>	Yes
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	1.0
<i>Form:</i>		<i>Condition:</i>	Deteriorated
<i>Interior Plan Type:</i>		<i>Threats to Resource:</i>	Deterioration Development Neglect

The second outbuilding is possibly a small well-house located approximately 20 feet west of the main structure.

**Individual Resource Detail Information**

<i>Resource Type:</i>	Privy	<i>Primary Resource?</i>	No
<i>Date of Construction:</i>	post 1900 (Site Visit)	<i>Accessed?</i>	No Not accessible
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	1.0
<i>Form:</i>		<i>Condition:</i>	Deteriorated
<i>Interior Plan Type:</i>		<i>Threats to Resource:</i>	Deterioration Development Neglect

There is an outhouse located approximately 65 feet southwest of the main structure.

**Individual Resource Detail Information**

<i>Resource Type:</i>	Single Dwelling	<i>Primary Resource?</i>	Yes
<i>Date of Construction:</i>	post 1900 (Site Visit)	<i>Accessed?</i>	Yes
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	1.5
<i>Form:</i>		<i>Condition:</i>	Deteriorated
<i>Interior Plan Type:</i>	Hall-Parlor	<i>Threats to Resource:</i>	Deterioration Development Neglect

An architectural resource (053-6070) was identified on the parcel and dates to the 1940s (Plate I). The structure is located on a ridge line overlooking the South Fork of Broad Run to the south. The house is a one-story symmetrical three-bay building on brick piers. The majority of the crawl space is covered with metal sheeting. The wood frame building is covered with asphalt "BricTex" sheeting. There is a one-story wood frame porch with four wooden square-post supports. The roof covering the porch is a boxed-sheathed roof with corrugated metal roof. The entrance door is a wood panel door with a single glass pane, and an aluminum storm door. The windows are all 2-over-2 double hung wooden sash with decorative metal shutters. The main portion of the house is two rooms and there are two lean-to additions on the west elevation of the structure. The first addition extends the length of the house, while the second addition is in the form of an ell-addition. The attic is completed with two small rooms, but has no dormers. The house has been vacant for many years and is in poor condition.



**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6070**

**Other DHR ID#:**

**Primary Resource Exterior Component Description:**

<u>Component</u>	<u>Comp Type/Form</u>	<u>Material</u>	<u>Material Treatment</u>
Chimneys	Chimneys - Interior stove flue	Brick	Chimneys - Bond, Common
Foundation	Foundation - Piers	Brick	Chimneys - Bond, Common
Porch	Porch - 1-story, 1-bay	Wood	Porch - Posts
Roof	Roof - Gable, Side	Metal	Roof - Corrugated
Structural System	Structural System - Frame	Wood	Structural System - Siding, Bricktex
Windows	Windows - Sash, Double-Hung	Wood	Windows - 4/4, Paired

**Historic Time Period(s):** P- Reconstruction and Growth (1866 to 1916)  
Q- World War I to World War II (1917-1945)

**Historic Context(s):** Architecture/Community Planning  
Domestic  
Subsistence/Agriculture

**Significance Statement**

This house is a ubiquitous style for the area with no significant characteristics. The house can not be associated with any individuals of historical significance at the local, state, or federal level. The house is recommended not eligible for listing on the NRHP.

**National Register Eligibility Information (Intensive Level Survey):**

<u>NR Count</u>	<u>NR Resource Type</u>	<u>NR Resource Status</u>
4	Building	Contributing
Contributing: 4		

**National Register Criteria:**

**Period of Significance:**

**Level of Significance:**

**Graphic Media Documentation**

<u>DHR Negative #</u>	<u>Photographic Media</u>	<u>Negative Repository</u>	<u>Photo Date</u>	<u>Photographer</u>
1-7	35 mm B&W	VDHR	October 12, 2004	Westport2
25-26	Digital	CRI, Fredericksburg	October 12, 2004	Westport2

**Bibliographic Documentation**

**Reference #:** 1

**Bibliographic RecordType:** Report  
**Author:** John Cooke

**DHR CRM Report Number:**

**Notes:**

A Phase I Cultural Resource Survey of the 71-Acre Goshen Road Assemblage within the Proposed Westport Development, Loudoun County, Virginia. 2004

**Reference #:** 2

**Bibliographic RecordType:** Report  
**Author:** CRI

**DHR CRM Report Number** LD-276

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6070**

**Other DHR ID#:**

**Notes:**

LD-276: Phase I Cultural Resource Survey of Approximately 731 Acres of the Proposed Westport Development, Loudoun County, Virginia, March 2005. #2009-1282

**Cultural Resource Management (CRM) Events**

**CRM Event # 1,**

**Cultural Resource Management Event:** Survey: Phase I/Reconnaissance

**Date of CRM Event:** October 26, 2004

**CRM Person:** Cultural Resources, Inc.

**CRM Event Notes or Comments:**

UTM Data is in NAD 1927 meters.

**CRM Event # 2,**

**Cultural Resource Management Event:** DHR Staff: Not Eligible

**Date of CRM Event:** September 04, 2009

**CRM Person:** Ron Grayson

**VDHR Project ID # Associated with Event:** 2009-1282

**CRM Event Notes or Comments:**

DHR staff provided a courtesy review of the Goshen Road School Project, including the report Phase I Cultural Resource Survey of Approximately 731 Acres of the Proposed Westport Development, Loudoun County, Virginia (Cooke et al:2005). Based upon the information presented in the report, as well as other previously received reports, the level of effort appears to be sufficient to have identified all historic properties potentially impacted by the construction activities.

Based upon the information provided, DHR concurs with Wetland Studies' determination that three historic resources (DHR ID numbers 053-6050, 053-6051, & 053-6070) lie within the project boundaries and are not eligible for inclusion in the National Register of Historic Places.

These documents were reviewed by this office to provide technical assistance, not as a formal review for compliance with local, state, or federal legislation. Based upon the project description and other information presented in the documents it is DHR's determination that no historic properties will likely be affected by this action. DHR looks forward to receiving a formal description of the project and it's Area of Potential Effects for the appropriate government agency before making a final recommendation.

**Bridge Information**

**Cemetery Information**

**Ownership Information**

**Name:** ..... William and Joan Larsen  
**Address:** ..... 24751 Goshen Road  
**City:** ..... Aldie  
**Zip:** ..... 20105      **State:** Virginia      **Country:** USA  
**Relation to the Property:** Owner of property

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6050**

**Other DHR ID#:**

**Resource Information**

**Resource Name(s):** Kline House, 24866 Goshen Road  
(Function/Location)  
**Date of Construction:** ca 1900

**Local Historic District :**

**Location of Resource**

**County/Independent City:** Loudoun  
**Magisterial District:** Aldie  
**Town/Village/Hamlet:** Aldie  
**Tax Parcel:**  
**Zip Code:** 20105  
**Address(s):** 24866 Goshen Road (Current)  
**USGS Quadrangle Name:** ARCOLA  
**UTM Boundary Coordinates :**

**National Register Eligibility Status**

Property has been recommended Not Eligible for listing

<u>NAD</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>
	18	4312116	277507

**UTM Center coordinates :**  
**UTM Data Restricted?.**

**Resource Description**

**Ownership Status:** Private  
**Government Agency Owner:**  
**Acreage:**  
**Surrounding area:** Rural  
**Open to Public:** No  
**Site Description:**

The house and the surrounding yard are poorly maintained. This house is located along Goshen Road, which is a dirt road in a rural area.

**Secondary Resource Summary:**

There is a stable and an equipment shed/workshop associated with this house.

**Individual Resource Information**

<u>Count</u>	<u>Resource Types</u>	<u>Resource Status</u>
1	Single Dwelling	Contributing
1	Stable	Contributing
1	Workshop	Non-Contributing

**Individual Resource Detail Information**

<u>Resource Type.</u>	<u>Stable</u>	<u>Primary Resource?</u>	<u>No</u>
<b>Date of Construction:</b>	ca 1900	<b>Accessed?</b>	
<b>Architectural Style</b>	Vernacular	<b>Number of Stories:</b>	1.0
<b>Form:</b>		<b>Condition:</b>	Fair
<b>Interior Plan Type.</b>		<b>Threats to Resource:</b>	Deterioration Development

December 2009--A simple frame shed with gable roof and board-and-batten siding resting on concrete block piers. A deep

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6050**

**Other DHR ID#:**

shed-roofed overhang of late 20th-century construction extends from the south and east elevations. The owner of the property indicated that the shed had once stood south of the dwelling but had been moved to its current location sometime prior to 1982 when he purchased the property. The shed was likely constructed sometime in the first half of the 20th century but a specific date is unknown.

**Individual Resource Detail Information**

<i>Resource Type:</i>	Workshop	<i>Primary Resource?</i>	No
<i>Date of Construction:</i>	ca 1950	<i>Accessed?</i>	No
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	1 0
<i>Form:</i>		<i>Condition:</i>	Poor
<i>Interior Plan Type:</i>		<i>Threats to Resource:</i>	Deterioration Development Transportation Expansion

To the east is a one-story equipment shed/workshop that features a gabled roof and exterior clad in corrugated metal. The building is a pole-shed with the majority sided on three sides with corrugated metal with the northern 2/3 of the east elevation open for vehicle/machinery access. The southern third is fully enclosed with a metal stove-chimney piercing the roof.

**Individual Resource Detail Information**

<i>Resource Type:</i>	Single Dwelling	<i>Primary Resource?</i>	Yes
<i>Date of Construction:</i>	ca 1900 {Site Visit}	<i>Accessed?</i>	No
<i>Architectural Style:</i>	Other	<i>Number of Stories:</i>	2.0
<i>Form:</i>		<i>Condition:</i>	Fair
<i>Interior Plan Type:</i>		<i>Threats to Resource:</i>	Deterioration Development Transportation Expansion

Built ca. 1900, this two-story Frame Vernacular style house features a wooden frame structural system that rests on brick piers. The exterior is clad in aluminum siding, and the cross-gabled roof is covered in standing-seam metal. There are two chimneys, a brick chimney on the east exterior end and a modern stone chimney on the north exterior end. A shed-roofed porch is situated between the main portion of the house and the rear ell. A one-story gabled addition has been appended to the north façade. The windows are two-over-two wooden double-hung sash with decorative shutters.

December 2009--The shed-roofed porch between the main portion of the house and the ell has been removed.

**Primary Resource Exterior Component Description:**

<u>Component</u>	<u>Comp Type/Form</u>	<u>Material</u>	<u>Material Treatment</u>
Chimneys	Chimneys - Exterior end	Stone	Chimneys - Rubble, Random
Porch	Porch - Missing	other	Porch - Removed/None
Roof	Roof - Gable	Metal	Roof - Standing Seam
Foundation	Foundation - Piers	Brick	Foundation - Bond, American
Structural System	Structural System - Frame	Wood	Structural System - Siding, Aluminum
Windows	Windows - Sash, Double-Hung	Wood	Windows - 2/2
Chimneys	Chimneys - Exterior end	Brick	Chimneys - Bond, American

*Historic Time Period(s):* P- Reconstruction and Growth (1866 to 1916)  
Q- World War I to World War II (1917-1945)  
S- The New Dominion (1946- Present)

*Historic Context(s):* Domestic

**Significance Statement**

This house and its associated outbuildings display designs common for the period of construction and place. This house features alterations including the addition of aluminum siding and decorative shutters, and a large addition that has been appended to the north

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6050**

**Other DHR ID#:**

elevation. This resource has no apparent association with any event or person important in our nation's history, lacks architectural significance, and does not appear to have the ability to yield important information. The resource is recommended as not eligible for the NRHP under Criteria A, B, C, or D.

***National Register Eligibility Information (Intensive Level Survey):***

*National Register Criteria:*

*Period of Significance:*

*Level of Significance:*

***Graphic Media Documentation***

<i>DHR Negative #</i>	<i>Photographic Media</i>	<i>Negative Repository</i>	<i>Photo Date</i>	<i>Photographer</i>
3	35mm B&W	VDHR	March 23, 2004	Single Dwelling

***Bibliographic Documentation***

*Reference #:* 1

*Bibliographic RecordType:* DHR File Data

*Author:* CCR, Inc.

*DHR CRM Report Number:*

*Notes:*

VDHR # 2003-1405

VDOT # R000-96A-102, PE-101

Tri-County Parkway Cultural Resource Assessment Survey Corridor D

*Reference #:* 2

*Bibliographic RecordType:* Report

*Author:* Kim Snyder

*DHR CRM Report Number:*

*Notes:*

Phase I Archeological Investigations Of The

+ 97.16 Acre High School #7 And Future

Elementary School Property,

Loudoun County, Virginia

***Cultural Resource Management (CRM) Events***

*CRM Event #* 1.

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6050**

**Other DHR ID#:**

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**Cultural Resource Management Event:** DHR Staff: Not Eligible  
**Date of CRM Event:** September 04, 2009  
**CRM Person:** Ron Grayson  
**VDHR Project ID # Associated with Event:** 2009-1282  
**CRM Event Notes or Comments:**

DHR staff provided a courtesy review of the Goshen Road School Project, including the report Phase I Cultural Resource Survey of Approximately 731 Acres of the Proposed Westport Development, Loudoun County, Virginia (Cooke et al. 2005). Based upon the information presented in the report, as well as other previously received reports, the level of effort appears to be sufficient to have identified all historic properties potentially impacted by the construction activities

Based upon the information provided, DHR concurs with Wetland Studies' determination that three historic resources (DHR ID numbers 053-6050, 053-6051, & 053-6070) lie within the project boundaries and are not eligible for inclusion in the National Register of Historic Places.

These documents were reviewed by this office to provide technical assistance, not as a formal review for compliance with local, state, or federal legislation. Based upon the project description and other information presented in the documents it is DHR's determination that no historic properties will likely be affected by this action. DHR looks forward to receiving a formal description of the project and it's Area of Potential Effects for the appropriate government agency before making a final recommendation.

**CRM Event # 2,**  
**Cultural Resource Management Event:** Survey: Phase I/Reconnaissance  
**Date of CRM Event:** March 23, 2004  
**CRM Person:** CCR, Inc.  
**VDHR Project ID # Associated with Event:** 2003-1405  
**CRM Event Notes or Comments:**  
VDHR # 2003-1405  
VDOT # R000-96A-102, PE-101  
Tri-County Parkway Cultural Resource Assessment Survey Corridor D

**CRM Event # 3,**  
**Cultural Resource Management Event:** DHR Staff: Not Eligible  
**Date of CRM Event:** July 23, 2004  
**CRM Person:** Marc Holma  
**VDHR Project ID # Associated with Event:** 2003-0042  
**CRM Event Notes or Comments:**

**CRM Event # 4,**  
**Cultural Resource Management Event:** Survey: Phase I/Reconnaissance  
**Date of CRM Event:** December 2009  
**CRM Person:** Thunderbird Archeology WSSI  
**CRM Event Notes or Comments:**

Updated structure form with more current information; added omitted outbuilding.

**Bridge Information**

**Cemetery Information**

**Ownership Information**

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6051**

**Other DHR ID#:**

**Resource Information**

**Resource Name(s):** Monday-Larsen-Hall House {Historic/Current}  
House, 24939 Goshen Road {Function/Location}  
**Date of Construction:** ca 1870

**Local Historic District :**

**National Register Eligibility Status**

Property has been recommended Not Eligible for listing

**Location of Resource**

**County/Independent City:** Loudoun  
**Magisterial District:** Aldie  
**Town/Village/Hamlet:** Aldie  
**Tax Parcel:** 248-38-2718  
**Zip Code:** 20105  
**Address(s):** 24939 Goshen Road {Current}  
**USGS Quadrangle Name:** ARCOLA  
**UTM Boundary Coordinates :**

	<u>NAD</u>	<u>Zone</u>	<u>Easting</u>	<u>Northing</u>
<b>UTM Center coordinates :</b>		18	431 1799	277491
<b>UTM Data Restricted?.</b>	No			

**Resource Description**

**Ownership Status:** Private  
**Government Agency Owner:**  
**Acreage:** 3.00  
**Surrounding area:** Rural  
**Open to Public:** No  
**Site Description:**

This house was moved to its current location sometime in the early 1900s, according to the current owner, Frances L. Hall. Mr Hall is married to a Ms. Larsen, who inherited the house from her parents Mr. Hall has constructed six small outbuildings for storage. The outbuildings are scattered around the wooded property that is located along Goshen Road (dirt road). The Halls own 3 acres of land.

**Secondary Resource Summary:**

There are six sheds associated with this house

**Individual Resource Information**

<u>Count</u>	<u>Resource Types</u>	<u>Resource Status</u>
1	Single Dwelling	Contributing
6	Shed	Non-Contributing

**Individual Resource Detail Information**

<u>Resource Type.</u>	<u>Shed</u>	<u>Primary Resource?</u>	<u>No</u>
<b>Date of Construction:</b>	ca 1955 {Site Visit/Owner}	<b>Accessed?</b>	No
<b>Architectural Style</b>	Other	<b>Number of Stories:</b>	1 0
<b>Form:</b>		<b>Condition</b>	Fair
<b>Interior Plan Type</b>		<b>Threats to Resource</b>	Transportation Expansion

There are six small wooden sheds that are associated with this house, all of which constructed by the current owner. All feature

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6051**

**Other DHR ID#:**

roofs covered in either standing-seam metal or corrugated metal.

**Individual Resource Detail Information**

<u>Resource Type:</u>	Single Dwelling	<u>Primary Resource?</u>	Yes
<u>Date of Construction:</u>	ca 1870 {Site Visit/Owner}	<u>Accessed?</u>	No
<u>Architectural Style:</u>	Other	<u>Number of Stories:</u>	2.0
<u>Form:</u>		<u>Condition:</u>	Good
<u>Interior Plan Type:</u>			

Threats to Resource: Transportation Expansion

Built ca. 1870, this two-story Frame Vernacular style house was moved to its present location in the early 1900s. This house, which originally was a small 1-house, was reportedly built by members of the Monday family and was later owned by the Larsens. The Larsens daughter inherited the house and currently lives there with her husband, Frances L. Hall. Later generations of the Larsen family own a majority of the property along the west side of Goshen Road. The house features a wooden frame structural system that rests on a solid concrete block foundation. The original exterior has been covered in vinyl siding, and the side-gabled roof is clad in standing-seam metal. Composition shingles are on the hipped addition on the south façade. There are also two shed additions that have been appended to the north and west elevations of the house. The east elevation features an enclosed shed-roofed porch. A brick chimney is situated on the west slope of the roof.

**Primary Resource Exterior Component Description:**

<u>Component</u>	<u>Comp Type/Form</u>	<u>Material</u>	<u>Material Treatment</u>
Chimneys	Chimneys - Central interior	Brick	Chimneys - Bond, American
Foundation	Foundation - Solid/Continuous	Concrete	Foundation - Block
Porch	Porch - 1-story	Wood	other
Roof	Roof - Shed	Asphalt	Roof - Shingle
Roof	Roof - Gable	Metal	Roof - Standing Seam
Structural System	Structural System - Frame	Wood	Structural System - Siding, Vinyl
Windows	Windows - Sash, Double-Hung	Wood	Windows - 2/2
Windows	Windows - Sash, Double-Hung	Aluminum	Windows - 1/1

Historic Time Period(s): P- Reconstruction and Growth (1866 to 1916)

Historic Context(s): Domestic

**Significance Statement**

This house and its associated outbuildings are currently in good condition, but its design is common for the period of construction and place. Also this house has undergone numerous alterations including additions on each elevation, updated windows, updated doors, updated roofing materials, vinyl siding, and a change of location as of sometime during the early 1900s. This resource has no apparent association with any event or person important in our nation's history, lacks architectural significance, and does not appear to have the ability to yield important information. The resource is recommended as not eligible for the NRHP under Criteria A, B, C, or D.

**National Register Eligibility Information (Intensive Level Survey):**

<u>NR Count</u>	<u>NR Resource Type</u>	<u>NR Resource Status</u>
1	Building	Contributing
6	Building	Non-contributing
Contributing: 1		Non-Contributing: 6

**National Register Criteria**

Period of Significance

Level of Significance



**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6051**

**Other DHR ID#:**

**Graphic Media Documentation**

<i>DHR Negative #</i>	<i>Photographic Media</i>	<i>Negative Repository</i>	<i>Photo Date</i>	<i>Photographer</i>
	35mm B&W prints		March 23, 2004	Single Dwelling

**Bibliographic Documentation**

*Reference #:* 1

*Bibliographic RecordType:* DHR File Data

*Author:* CCR, Inc.

*DHR CRM Report Number:*

*Notes:*

VDHR # 2003-1405

VDOT # R000-96A-102, PE-101

Tri-County Parkway Cultural Resource Assessment Survey Corridor D

*Reference #:* 2

*Bibliographic RecordType:* Report

*Author:* CRI

*DHR CRM Report Number:* LD-276

*Notes:*

LD-276: Phase I Cultural Resource Survey of Approximately 731 Acres of the Proposed Westport Development, Loudoun County, Virginia, March 2005. #2009-1282

**Cultural Resource Management (CRM) Events**

*CRM Event #* 1,

*Cultural Resource Management Event:* Survey:Phase I/Reconnaissance

*Date of CRM Event:* March 23, 2004

*CRM Person:* CCR, Inc.

*VDHR Project ID # Associated with Event:* 2003-1405

*CRM Event Notes or Comments:*

VDHR # 2003-1405 - VDOT # R000-96A-102, PE-101

Tri-County Parkway Cultural Resource Assessment Survey Corridor D

*CRM Event #* 2,

*Cultural Resource Management Event:* DHR Staff: Not Eligible

*Date of CRM Event:* July 23, 2004

*CRM Person:* Marc Holma

*VDHR Project ID # Associated with Event:* 2003-0042

*CRM Event Notes or Comments:*

**Virginia Department of Historic Resources  
Reconnaissance Level Survey**

**DHR ID#: 053-6051**

**Other DHR ID#:**

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*CRM Event # 3,*

*Cultural Resource Management Event:*

DHR Staff: Not Eligible

*Date of CRM Event:*

September 04, 2009

*CRM Person:*

Ron Grayson

*VDHR Project ID # Associated with Event:*

2009-1282

*CRM Event Notes or Comments:*

DHR staff provided a courtesy review of the Goshen Road School Project, including the report Phase I Cultural Resource Survey of Approximately 731 Acres of the Proposed Westport Development, Loudoun County, Virginia (Cooke et al:2005). Based upon the information presented in the report, as well as other previously received reports, the level of effort appears to be sufficient to have identified all historic properties potentially impacted by the construction activities.

Based upon the information provided, DHR concurs with Wetland Studies' determination that three historic resources (DHR ID numbers 053-6050, 053-6051, & 053-6070) lie within the project boundaries and are not eligible for inclusion in the National Register of Historic Places.

These documents were reviewed by this office to provide technical assistance, not as a formal review for compliance with local, state, or federal legislation. Based upon the project description and other information presented in the documents it is DHR's determination that no historic properties will likely be affected by this action. DHR looks forward to receiving a formal description of the project and it's Area of Potential Effects for the appropriate government agency before making a final recommendation.

***Bridge Information***

***Cemetery Information***

***Ownership Information***

**DEPARTMENT OF BUILDING AND DEVELOPMENT**

**COUNTY OF LOUDOUN**

**MEMORANDUM**

RECEIVED

JUL 08 2010

LOUDOUN COUNTY  
DEPARTMENT OF PLANNING

**DATE:** July 8, 2010

**TO:** Marchant Schneider, Project Manager

**FROM:** Todd Taylor, Environmental Review Team *TD*

**THROUGH:** William Marsh, Environmental Review Team Leader

**CC:** Dana Malone, Urban Forester  
Theresa Stein, Zoning Planner  
Joe Gorney, Community Planner, Department of Planning

**SUBJECT:** **ZMAP-2010-0001 and SPEX-2010-0003**  
**HS-7 Dulles South and Elementary School**  
**(2nd Submission)**

The Environmental Review Team (ERT) reviewed the subject application, including plan set dated March 8, 2010, revised through June 8, 2010. A site visit with the County Urban Forester was conducted on June 28, 2010, to look at potential reforestation areas. Our comments pertaining to the current application are as follows:

- 1) A "Tree Cover Evaluation – Southern Portion of Site", prepared by Bowman Consulting, dated December 15, 2009, was provided with this submission. The evaluation identified 24 individual trees with a diameter at breast height (DBH) of 30 inches or greater. As previously stated, the hardwood stand located in the southern portion of the property is the most desirable tree cover for preservation on the property. Staff recommends exploring all opportunities to preserve portions of the tree stand and large individual tree (with a minimum condition rating of 60) within the development layout, including perimeter buffers and pocket tree save areas. [Revised General Plan (RGP) Forests, Trees, and Vegetation Policy 1]
- 2) During the June 28, 2010, site visit, two reforestation opportunities were identified and discussed: 1) open floodplain immediately adjacent to the South Fork of Broad Run, including the emergent wetland, outside of the existing and proposed sanitary sewer easements; and 2) open areas within the 50-foot GI Buffer, adjacent to the intermittent stream in the western portion of the property, outside of the proposed sanitary sewer easement. Based on site conditions, deer browse potential, and minimizing cost, the County Urban Forester recommends the use of 3-gallon containerized materials within the floodplain and bare root seedlings with tubes outside of the floodplain. Staff recommends that the reforestation areas be identified

on sheets 3 (Special Exception/Rezoning Plat) and 6 (Water and Sewer Facilities Map). Attachment A and Photographs 1 and 2 identify the approximate location of the reforestation areas. Staff further recommends that a reforestation commitment be provided specifying the following: 1) the applicant shall work with the County Urban Forester on the development of the reforestation plan; 2) the reforestation plan shall be submitted to the County Urban Forester for review and approval prior to the approval of the first site plan; 3) plant material shall consist of 3-gallon containerized native trees within the floodplain and bare root seedlings with tubes outside of the floodplain; 4) the reforestation shall be implemented prior to issuance of the first certificate of occupancy; 5) the applicant shall ensure a minimum of 80 percent of the initial planting is determined to be established after two growing seasons; 6) an annual inspection shall be conducted by the applicant and the County Urban Forester to verify establishment; and 7) if the 80 percent establishment isn't achieved after the second growing season, a onetime planting to bring the project to full stocking shall be conducted by the applicant.

Consistent with RGP Forests, Trees, and Vegetation Text and Policy 1 on Page 5-32, reforestation efforts will help to recapture tree canopy that will be lost as a result of the project as well as increase riparian function and associated water quality benefits.

- 3) The applicant's responses state that the proposed plan incorporates an enhanced extended detention pond, west of the stadium. Staff appreciates this enhanced water quality measure. However, to provide a more comprehensive enhanced water quality approach, staff recommends that all extended detention ponds (dry ponds) be designed as enhanced extended detention ponds (dry ponds with shallow marsh plantings). [Revised 1993 LCZO Section 6-1310(H) and RGP Surface Water Policy 5]
- 4) The enhanced extended detention pond, west of the stadium, corresponds with a proposed sanitary sewer line, which is problematic from a maintenance perspective. Please revise the pond location or sanitary sewer alignment. [FSM Section 5.225.A.4]
- 5) Staff recommends relocating the 8-inch sanitary sewer line to align with the existing ford crossing the South Fork Broad Run and to connect to the existing sanitary sewer at the next manhole to the west. These adjustments would minimize tree cover loss adjacent to the stream as well as avoid wetland impacts. Attachment B depicts the recommended sanitary sewer alignment and connection (blue). [RGP Forests, Trees, and Vegetation Policy 1 and River and Stream Corridor Resources Policy 23]

Please contact me if you need any additional information or have questions.

## ATTACHMENT A – POTENTIAL REFORESTATION AREAS



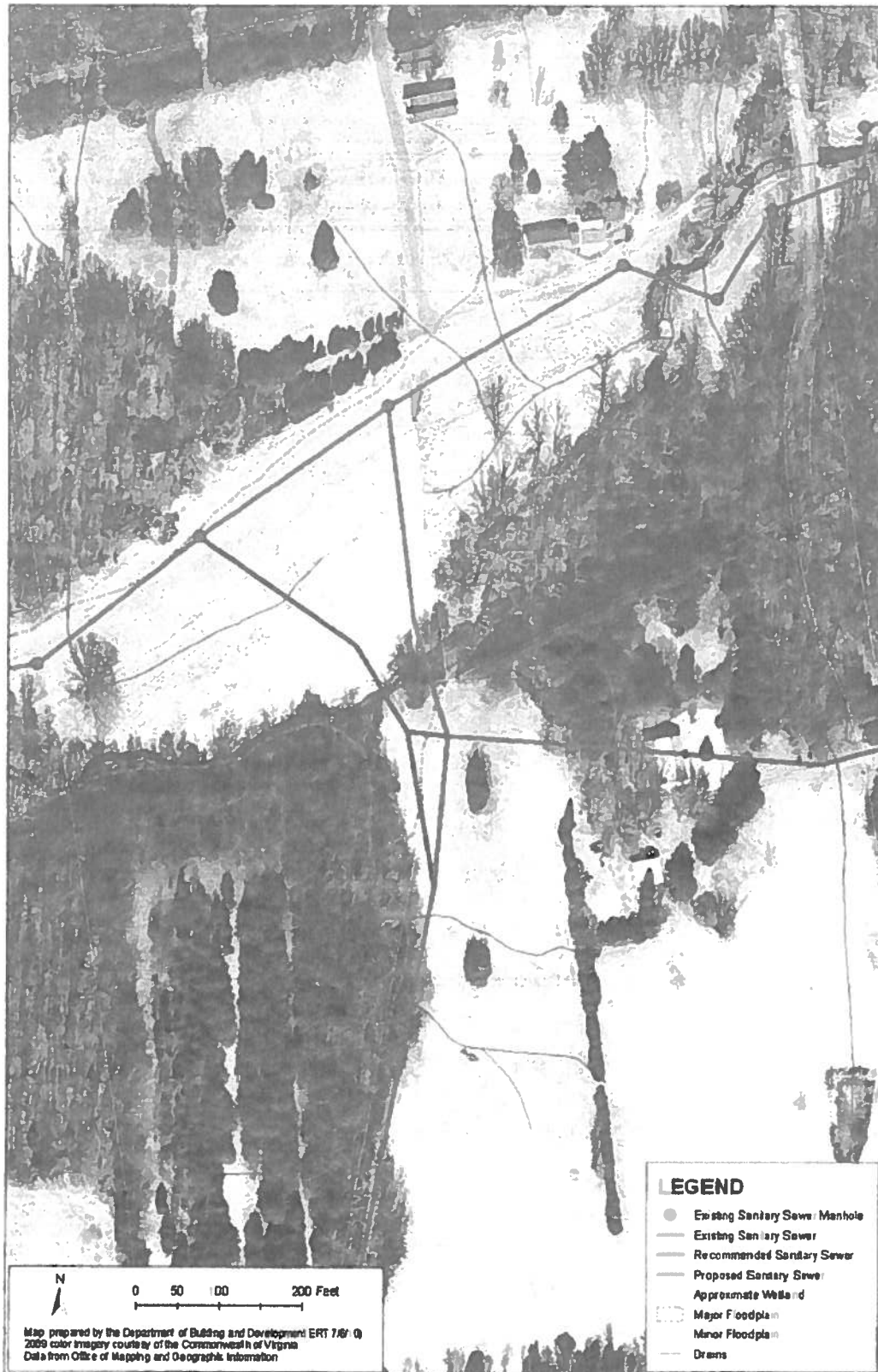


**Photograph 1: Open floodplain area adjacent to the South Fork Broad Run**



**Photograph 2: Open buffer area adjacent to western intermittent stream**

## ATTACHMENT B – RECOMMENDED SANITARY SEWER CONNECTION



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**DEPARTMENT OF BUILDING AND DEVELOPMENT**

**COUNTY OF LOUDOUN**

**MEMORANDUM**

DATE: April 20, 2010

TO: Marchant Schneider, Project Manager

FROM: Todd Taylor, Environmental Review Team *TS*

THROUGH: William Marsh, Environmental Review Team Leader *WM*

CC: Theresa Stein, Zoning Planner  
Joe Gomey, Community Planner, Department of Planning

**SUBJECT: ZMAP-2010-0001 and SPEX-2010-0003  
HS-7 Dulles South and Elementary School**

**RECEIVED**

APR 20 2010

LOUDOUN COUNTY  
DEPARTMENT OF PLANNING

The Environmental Review Team (ERT) reviewed the subject application during the April 12, 2010, ERT Meeting. A site visit was also conducted on April 15, 2010. Our comments pertaining to the current application are as follows:

*Regarding tree cover*

- 1) Staff reviewed the Forest Management Plan & Cover Type Map, prepared by Zimar & Associates, Inc., dated February 15, 2005. Cover Type 1, consisting of upland hardwoods, located in the southern portion of the property, is the most desirable tree cover for preservation on the subject property. The hardwood tree stand corresponds to the proposed elementary school site. Staff recommends exploring all opportunities to preserve portions of the tree stand within the development layout, including perimeter buffers and a pocket tree save area separating the elementary school site from the high school baseball and softball fields (adjacent to the phase line). Attachment A provides an example pocket tree save area. [Revised General Plan (RGP) Forests, Trees, and Vegetation Policy 1]
- 2) During the site visit, it was noted that larger trees within the above referenced hardwood stand were tagged with an identification number. However, no individual tree information was provided with the Forest Management Plan & Cover Type Map report. For Cover Type 1, please identify all potential specimen trees with a diameter at breast height (DBH) of 30 inches or more on Sheet 3. Please also provide a corresponding table identifying scientific and common names, DBH, and condition rating. [RGP Forests, Trees, and Vegetation Policies 1 and 9]

- 3) Assuming the elementary school layout will not be adjusted to preserve the majority of Cover Type 1, staff recommends that the applicant recapture the loss tree canopy by committing to reforestation efforts on the subject property. Staff has identified the following two reforestation opportunities, in order of preference (see Attachment B and Photographs 1 and 2): 1) open floodplain immediately adjacent to the South Fork of Broad Run; and 2) open areas within the 50-foot GI Buffer, adjacent to the intermittent stream in the western portion of the property. As stated on Page 5-32 of the RGP, "riparian forests along streams provide the greatest single protection of water quality by filtering pollutants from stormwater runoff, decreasing stream bank erosion, and maintaining the physical, chemical, and biological condition of the stream environment".

Staff recommends that the reforestation commitment specify the following: 1) the applicant shall work with the County Urban Forester on the development of the reforestation plan; 2) the reforestation plan shall be submitted to the County Urban Forester for review and approval prior to the approval of the first site plan; 3) plant material shall consist of 3-gallon containerized native trees, unless County staff determines smaller material (live stakes, bare root seedlings, etc.) is appropriate; 4) the reforestation shall be implemented prior to issuance of the first certificate of occupancy; 5) the applicant shall ensure a minimum of 80 percent of the initial planting is determined to be established after two growing seasons; 6) an annual inspection shall be conducted by the applicant and the County Urban Forester to verify establishment; and 7) if the 80 percent establishment isn't achieved after the second growing season, a onetime planting to bring the project to full stocking shall be conducted by the applicant.

- 4) To complement the protection of the eastern stream provided by the wetland preservation easement, which is mostly on the eastern side of the stream, staff recommends providing a tree save area that corresponds to the 50-foot GI Buffer on the western side of the stream. [RGP Forests, Trees, and Vegetation Policy 1 and River and Stream Corridor Policy 7]

#### *Regarding water quality*

- 5) For the proposed bus parking area, ERT recommends installation of an oil-water separator to treat all runoff, above and beyond other best management practice (BMP) measures required. These areas are consistent with "fleet storage areas," a hotspot use identified in FSM Section 5.320.E.1d.
- 6) To provide enhanced water quality protection, staff recommends that any proposed stormwater management (SWM)/BMP extended detention ponds (dry ponds) be designed as enhanced extended detention ponds (dry ponds with shallow marsh plantings). [Revised 1993 LCZO Section 6-1310(H) and RGP Surface Water Policy 5]

- 7) Note 20 on Sheet 1 states that bioretention is proposed within the site to encourage infiltration and groundwater recharge. Please identify potential bioretention locations on Sheet 3. Staff recommends directing stormwater runoff to bioretention facilities corresponding with moderately well to well drained soils located on the property. [RGP Surface Water Policy 2]
- 8) Please identify the shaded polygon depicted on Sheet 3, northwest of the high school stadium.
- 9) The regional SWM/BMP facility is located on-line with a jurisdictional stream, which is problematic. On-line SWM/BMP facilities are typically not permitted by the U.S. Army Corps of Engineers and Virginia Department of Environmental Quality. Staff recommends relocating the facility. [RGP River and Stream Corridor Resources Policies 11 and 23]

*Regarding steep slopes*

- 10) The steep slopes designation differs slightly from the Loudoun Geographic Information Systems (LOGIS) steep slopes layer. For clarity, please specify the basis for the steep slope designations on the plan set. [Revised 1993 LCZO Section 5-1508 and 6-407]

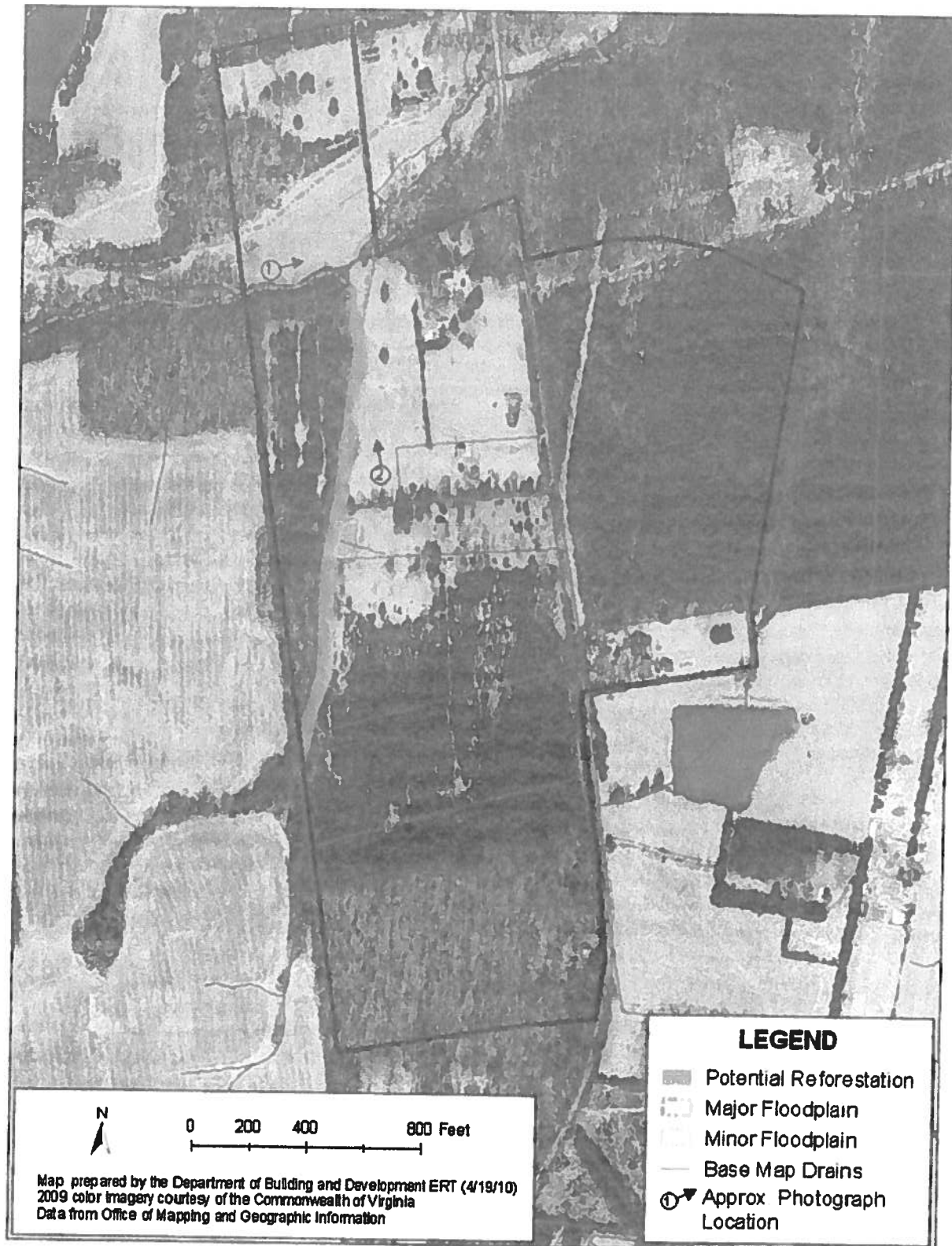
*Regarding green building practices*

- 11) Staff appreciates the inclusion of sustainable design elements described in the statement of justification, consistent with Public Facilities text and General Public Facilities Policy 3 on page 3-6 of the RGP, which state that it is important that the location and design of public facilities set the highest possible standards and a positive example. With the second submittal, staff requests a benchmark analysis for Leadership in Energy and Environmental Design (LEED) for Schools, version 3 to indicate desired design outcomes for site sustainability, water efficiency, energy and atmosphere, indoor air quality, efficient materials and resources use, and innovative design. Providing the analysis will help assess where public facility design ranks vis-à-vis the LEED "silver" goal that is recommended in the December 2007 Metropolitan Washington Council of Governments green building report that was endorsed by the Board of Supervisors on April 15, 2008.
- 12) ERT commends Loudoun County Public Schools for earning Energy Star "Partner of the Year" for 2009 and deeply respects the effective public outreach that school staff is performing on energy conservation.

Please contact me if you need any additional information or have questions.



## ATTACHMENT B – POTENTIAL REFORESTATION AREAS





**Photograph 1: Open floodplain area adjacent to the South Fork Broad Run**



**Photograph 2: Open buffer area adjacent to western intermittent stream**